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Customer Number 27045

REMARKS/ARGUMENTS

1.) Claim Amendments

Claim 35 has been canceled without prejudice. Claims 1-19 and 36-38 were previously canceled. Therefore, claims 20 through 34 are currently pending in the application. Favorable reconsideration of the application is respectfully requested in view of the foregoing amendments and the following remarks.

2.) Claim Rejections – 35 U.S.C. § 103(a)

The Examiner rejected claims 20-23, 25, 26 and 28-35 under 35 U.S.C. § 103(a) as being unpatentable over Kainulainen (US 5,796,793) in view of Dolev, et al. (US 5,784,421). Solely in order to narrow issues for later actions, the Applicant has canceled claim 35 without prejudice. Therefore, this rejection with respect to claim 35 is deemed to be moot. The Applicant respectfully traverses this rejection with respect to the other claims.

Claims 20, 32, 33, and 34:

As an initial discussion point, claim 20 is reproduced below:

20. A method of synchronizing nodes of a telecommunication network in which a master node is coupled to a Primary Reference Clock (PRC) and a plurality of slave nodes are arranged to synchronize their internal clocks to the PRC using data received on incoming data links, the method comprising:

propagating Synchronization Status Messages through the network from the master node, with each node through which a Message passes incorporating into the Message its own identity, thereby generating in each Message a path which has been followed by the Message;

waiting a predetermined amount of time to introduce an additional delay in the propagation of the Messages in at least certain of the network nodes; and

for each of at least some of the incoming links of each node, registering a path or path length of a Synchronization Status Message received on that link as an attribute for that link.

The Examiner admits that Kainulainen "does not explicitly show introducing an additional delay in the propagation of synchronization messages in at least certain of

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the network nodes." The Examiner then argues that "Dolev discloses a network node performing anonymous time synchronization in a network. Referring to Fig. 6, Dolev shows that a node, upon receiving a sync message from another node in the network, a random delay period is introduced before any subsequent processing is performed."

The Applicant does not dispute this statement. However, the "random delay period" of Dolev is not the same as the "predetermined amount of time" used in the Independent claims.

The term "random" means "lacking a definite plan, purpose, or pattern," or "made, done, or chosen at random "read random passages from the book" or "relating to, having, or being elements or events with definite probability of occurrence "random processes being or relating to a set or to an element of a set each of whose elements has equal probability of occurrence "a random sample"; random also means "determined by accident rather than design." RANDOM stresses lack of definite aim, fixed goal, or regular procedure "a random selection of books."¹

In contrast, the term "predetermined means "1: a: FOREORDAIN, PREDESTINE b: to determine beforehand, 2 : to impose a direction or tendency on beforehand."² Thus, by the very definition of the terms, Dolev's random delay period cannot possibly mean a predetermined time – even in the absolute broadest interpretation of the terms.

As provided in MPEP §2143, "[t]o establish a prima facie case of obviousness, the prior art reference (or references when combined) must teach or suggest all the claim limitations." Furthermore, under MPEP §2142, "[I]f the examiner does not produce a prima facie case, the applicant is under no obligation to submit evidence of nonobviousness." It is respectfully submitted that the cited art does not provide the missing claim limitations as discussed above. Consequently, all of the elements of claim 20 are not taught by the combination of Kainulainen and Dolev. Therefore, the Applicant respectfully requests that the §103 rejection with respect to claim 20 be withdrawn.

¹ Merriam Webster's Collegiate Dictionary, Copyright 2000.

² *Id.*

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Claims 21- 28 depend from claim 20 and recite further limitations in combination with the novel elements of claim 20. Therefore, the allowance of claims 21 through 28 is also respectfully requested.

Independent claims 32, 33, and 34 contain similar claim elements and, therefore, should be allowable for the similar reasons. The Applicant respectfully requests that the §103 rejection be withdrawn with respect to claims 32, 33, and 34.

Claims 28-31:

The Examiner justified rejecting claims 28-31 under 35 U.S.C. § 103(a) by stating that "Kainulainen shows that the delay for propagation and selection of the sync messages is a preset time period (Col. 7, lines 60-63)."

With reference to the independent claims, the Examiner admits that Kainulainen does not teach that an additional delay. If the additional delay is not taught, then the Applicant does not understand how Kainulainen can teach "wherein the additional delay introduced by a slave node is the same for all slave nodes which introduce an additional delay" as claimed in claim 28.

In any event, the Applicant respectfully disagrees with the relevance of the citation quoted by the Examiner. For convenience, the actual citation is reproduced below:

The decision means 23 of the control unit CU compares the messages and stores them in a memory 21, e.g. in priority order so that the selected synchronization signature always has the highest status. The decision means also receives the fault data of a signal from the corresponding interface unit in the form of a synchronization message (the signature then being in the form MAX-MAX-MAX) or as separate fault data. When the decision means judges from the supplied data that the node has to enter into the standard state for the preset time period, it selects the source of its timing as defined in the applied synchronization method for this kind of situation; it applies an appropriate synchronization signature to the interface-specific synchronization message transmission and reception means 16a and 16b from a memory 22 (where it generates an outgoing signature used in each particular case), and starts a timer means 25. The node informs the neighboring nodes about the change that has occurred by transmitting the new signature. When the timer means 25 indicates that

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the preset time period K has expired, the decision means 23 is again allowed to select the source of timing according to a normal procedure. Kainulainen, col. 7, line 54 to col. 8, line 7.

In contrast, claim 28 states "wherein the additional delay introduced by a slave node is the same for all slave nodes which introduce an additional delay." The quoted section relates to a change of source of the timing for a present time period. However, no additional delay is introduced. As explained earlier by Kainulainen:

In order that the above-described synchronization hierarchy could be established within the system, the system nodes interchange synchronization messages. These messages contain information by means of which individual nodes are able to select a timing source. The system nodes are prioritized and the system tends to synchronize itself with the clock frequency of a node having the highest level of priority. Normally each priority level is assigned to a single system node. Synchronization messages normally contain information about the origin of the clock frequency of the node transmitting the message and the priority of the node as well as a value describing the quality of the clock signal. Accordingly, a neighboring clock frequency which originates from a desired node and which is of the highest quality can be selected by an individual node as the source of its own clock frequency. At the system start-up each node selects its own internal clock source as the source of its clock frequency as it has not yet processed any incoming synchronization messages. After the node has processed the first incoming synchronization messages, it selects the clock frequency of a neighboring node having the highest level of priority as the source of its clock frequency. After all messages have been distributed over the system and the system has achieved a stable state as far as synchronization is concerned, the system has been synchronized hierarchically with the clock frequency of the master source. Kainulainen, col. 1, lines 36-62

In contrast, claim 28 teaches an additional delay "wherein the additional delay introduced by a slave node is the same for all slave nodes which introduce an additional delay." Kainulainen simply appears to teach that when the decision means judges from the fault data that the node should select a new source, it selects the source of its timing as defined in the applied synchronization method for the kind of situation. Kainulainen and Delov, therefore, do not teach all of the elements of claim 28. Because not all of

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the elements of claim 28 are taught by the combination of Kainulainen and Dolev, the Applicant respectfully requests allowance of claim 28.

With reference to claims 29, the Examiner states that Kainulainen shows the propagation of the sync messages may be delayed based on the distance and signature information contained with the received sync messages that are stored in the nodes memory (Col. 7-9, lines 60-55). Again, the Applicant respectfully disagrees with the significance of this citation.

The Applicant has reviewed the relatively lengthy citation, but could not find any reference to "waiting a predetermined amount of time to introduce an additional delay" wherein "the additional delay increases with distance from the master node." Although the citation mentions the use of the SOMS address, there is simply no indication that Kainulainen teaches waiting a predetermined amount of time to introduce an additional delay wherein "the additional delay increases with distance from the master node." If the Examiner disagrees with the Applicant's interpretation of the cited section, the Applicant respectfully asks the Examiner to specifically reference where he believes this claim element is taught by Kainulainen. Otherwise, the Applicant respectfully requests that the Examiner reconsider his rejection of claim 29 because all of the claim elements are not taught by the combination of Kainulainen and Dolev.

With reference to claims 30, the Examiner states that Kainulainen shows the propagation of the sync messages may be delayed based on the distance and signature information contained with the received sync messages that are stored in the nodes memory (Col. 7-9, lines 60-55). Again, the Applicant respectfully disagrees with the significance of this citation.

The Applicant has reviewed the relatively lengthy citation, but could not find any reference to an additional delay "wherein the additional delay to be introduced by a node for a Synchronization Status Message is identified in the Synchronization Status Message." Although the citation mentions the use of the SOMS address, there is simply no indication that Kainulainen teaches an additional delay. Consequently, there would be no reason to identify the delay in the Synchronization Status Message. If the Examiner disagrees with the Applicant's interpretation of the cited section, the Applicant respectfully asks the Examiner to specifically reference where he believes this claim

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element is taught by Kainulainen. Otherwise, the Applicant respectfully requests that the Examiner reconsider his rejection of claim 30 because all of the claim elements are not taught by the combination of Kainulainen and Dolev.

With reference to claims 31, the Examiner states that Kainulainen shows the propagation of the sync messages may be delayed based on the distance and signature information contained with the received sync messages that are stored in the nodes memory (Col. 7-9, lines 60-55). The Applicant respectfully disagrees with the significance of this citation.

The Applicant has reviewed the relatively lengthy citation, but could not find any reference to an additional delay "wherein the additional delay to be introduced by a node for a Synchronization Status Message is defined by an additional delay table stored at the node." Although the citation mentions the use of a synchronization list based on the SOMS address, there is simply no indication that Kainulainen teaches a waiting a predetermined amount of time to introduce an additional delay. Consequently, there is no use nor mention of "an additional delay table stored at the node." If the Examiner disagrees with the Applicant's interpretation of the cited section, the Applicant respectfully asks the Examiner to specifically reference where he believes this claim element is taught by Kainulainen. Otherwise, the Applicant respectfully requests that the Examiner reconsider his rejection of claim 31 because all of the claim elements are not taught by the combination of Kainulainen and Dolev.

The Examiner rejected claims 24 and 27 under 35 U.S.C. § 103(a) as being unpatentable over Kainulainen in view of Dolev further in view of Tikalsky (US 5,875,179). As provided in MPEP § 2143, "[t]o establish a prima facie case of obviousness, ... the prior art reference (or references when combined) must teach or suggest all the claim limitations." Furthermore, under MPEP § 2142, "[i]f the examiner does not produce a prima facie case, the applicant is under no obligation to submit evidence of nonobviousness." However, as discussed above, claim 20 contains elements which are not found in Kainulainen nor in Dolev. It is respectfully submitted that Tikalsky does not provide the missing claim limitations to amended claim 20. Claims 24 and 27, because they depend on claim 20, contain elements which are not

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found in Kainulainen nor Tikalsky. Therefore, the allowance of claims 24 and 27 is also respectfully requested.

CONCLUSION

In view of the foregoing remarks, the Applicant believes all of the claims currently pending in the Application to be in a condition for allowance. The Applicant, therefore, respectfully requests that the Examiner withdraw all rejections and issue a Notice of Allowance for all pending claims.

The Applicant requests a telephonic interview if the Examiner has any questions or requires any additional information that would further or expedite the prosecution of the Application.

Respectfully submitted,



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